



*P/*

*SPW*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Manus P. Henry et al.  
Serial No. : 10/637,620  
Filed : August 11, 2003  
Title : DIGITAL FLOWMETER

Art Unit : 1732  
Examiner : Manuel L. Barbee

**MAIL STOP AF**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

SUPPLEMENTAL SUBMISSION FOR INFORMATION DISCLOSURE STATEMENT OF  
APRIL 7, 2004

Applicant thanks the Examiner for the courtesies extended during the telephone conversation of March 23, 2005. As agreed during the conversation, Applicant submits herewith courtesy copies of the documents indicated in bold on the attached PTO Form-1449. As discussed, these documents were timely submitted, prior to the receipt of the Notice of Allowance, with the Information Disclosure Statement filed on April 7, 2004. Applicant requests that the Examiner initial at least the bolded references and return the Form PTO-1449 to show consideration thereof.

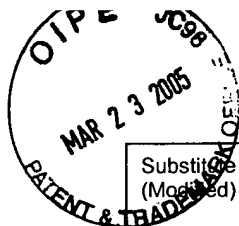
Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: March 23, 2005

*William G. Hughes, Jr.*  
William G. Hughes, Jr.  
Reg. No. 46,112

Fish & Richardson P.C.  
1425 K Street, N.W.  
11th Floor  
Washington, DC 20005-3500  
Telephone: (202) 783-5070  
Facsimile: (202) 783-2331



<b>Substitute Form PTO-1449</b> (Modified)  <b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))	<b>U.S. Department of Commerce Patent and Trademark Office</b>	<b>Attorney's Docket No.</b> 02052-079004	<b>Application No.</b> 10/637,620
	<b>Applicant</b> Manus P. Henry et al.		
	<b>Filing Date</b> August 11, 2003	<b>Group Art Unit</b> 1732	

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	Re 29,383	09/00/77	Gallatin et al.			
	AB	Re 31,450	11/29/83	Smith			
	AC	3,956,682	05/11/76	Van Dyck			
	AD	4,419,898	12/13/83	Zanker et al.			
	AE	4,422,338	12/27/83	Smith			
	AF	4,491,025	01/01/85	Smith et al.			
	AG	4,688,418	08/25/87	Cheung et al.			
	AH	4,727,746	03/01/88	Mikasa et al.			
	AI	4,757,390	07/12/88	Mehrgardt et al.			
	AJ	4,773,257	09/27/88	Aslesen et al.			
	AK	4,782,711	11/08/88	Pratt			
	AL	4,801,897	01/31/89	Flecken			
	AM	4,817,448	04/04/89	Hargarten et al.			
	AN	4,823,614	04/25/89	Dahlin			
	AO	4,852,410	08/01/89	Corwon et al.			
	AP	4,879,911	11/00/89	Zolock			
	AQ	4,891,991	01/00/90	Mattar et al.			
	AR	4,895,030	01/23/90	Bergamini et al.			
	AS	4,911,006	03/00/90	Hargarten et al.			
	AT	4,911,020	03/00/90	Thompson			
	AU	4,934,195	06/00/90	Hussain			
	AV	4,934,196	06/19/90	Romano			
	AW	4,996,871	03/00/91	Romano			
	AX	5,027,662	07/00/91	Titlow et al.			
	AY	5,029,482	07/09/91	Liu et al.			
	AZ	5,050,439	09/00/91	Thompson			
	BA	5,052,231	10/01/91	Christ et al.			

<b>Examiner Signature</b>	<b>Date Considered</b>
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)  <b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 02052-079004	Application No. 10/637,620
	Applicant Manus P. Henry et al.		
	Filing Date August 11, 2003	Group Art Unit 1732	

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	BB	5,054,326	10/08/91	Mattar			
	BC	5,218,869	06/15/93	Pummer			
	BD	5,228,327	07/20/93	Bruck			
	BE	5,259,250	11/09/93	Kolpak			
	BF	5,271,281	12/00/93	Mattar et al.			
	BG	5,343,764	09/00/94	Matter et al.			
	BH	5,347,874	09/20/94	Kalotay et al.			
	BI	5,400,653	03/28/95	Kalotay et al.			
	BJ	5,429,002	07/04/95	Coleman			
	BK	5,469,748	11/28/95	Kalotay			
	BL	5,497,665	03/00/96	Cage et al.			
	BM	5,497,666	03/12/96	Patten et al.			
	BN	5,535,632	07/16/96	Kolpak			
	BO	5,555,190	09/00/96	Derby et al.			
	BP	5,570,300	10/00/96	Henry et al.			
	BQ	5,578,764	11/26/96	Yokoi et al.			
	BR	5,594,180	01/00/97	Carpenter et al.			
	BS	5,648,616	07/15/97	Keel			
	BT	5,654,502	08/05/97	Dutton			
	BU	5,687,100	11/11/97	Buttler et al.			
	BV	5,774,378	06/00/98	Yang			
	BW	5,804,741	09/08/98	Freeman			
	BX	5,926,096	07/20/99	Mattar et al.			
	BY	5,969,264	10/19/99	Rivkin			
	BZ	6,073,495	06/13/00	Stadler			
	CA	6,092,429	07/25/00	Cunningham et al.			
	CB	6,311,136	10/30/01	Henry et al.			

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 02052-079004	Application No. 10/637,620
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Manus P. Henry et al.	
		Filing Date August 11, 2003	Group Art Unit 1732

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	CC	6,318,156	11/20/01	Dutton et al.			
	CD	6,327,914	12/11/01	Dutton			
	CE	6,505,519	01/14/03	Henry et al.			
	CF	6,564,619	05/20/03	Dutton et al.			

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	CG	EP 0 698 783 A1	28 FEB 1996	EUROPE			ABS	
	CH	EP 0 702 212 A2	20 MAR 1996	EUROPE			English	
	CI	EP 0696726A	14 FEB 1996	EPO				
	CJ	EP 0827096	04 MAR 1998	EUROPE				
	CK	WO 00/10059	24 FEB 2000	WIPO				
	CL	WO 93/21505	28 OCT 1993	PCT				

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	CM	A.F. Skea, "Effects of Gas Leaks in Oil Flow on Single-Phase Flowmeters", <i>Flow Measurement and Instrumentation</i> , Vol. 10, pp 146-150 (1999)
	CN	David Spitzer; "Mass Flowmeters"; <i>Industries Flow Measurement, Chapter 12</i> ; pp. 197-210; 1990
	CO	E. Luntta et al., "Neural Network Approach to Ultrasonic Flow Measurements", <i>Flow Measurement and Instrumentation</i> , Vol. 10, pp 35-43, 1999
	CP	J. Hemp et al.; "On the Theory and Performance of Coriolis Mass Flowmeters"; <i>Proceedings of the International Conference on Mass Flow Measurement Direct and Indirect</i> ; IBC Technical Services; 40 pages; February 1989
	CQ	J. Reimann, "Developments in Tow-Phase Mass Flow Rate Instrumentation", pp 339-402
	CR	J.T. Grumski et al., "Performance of a Coriolis-type Mass Flow Meter in the Measurement of Two-phase (air-liquid) Mixtures", ASME Fluid Engineering Division Publication FED, Vol. 17, pp 75-84, 1984
	CS	Joseph DeCarlo; "True Mass-Flow Measurement"; <i>Fundamentals of Flow Measurement, Unit 11-2</i> ; pp. 208-220; 1984
	CT	M. Henry et al., "The Implications of Digital Communications on Sensor Validation", Report No. QUEL 1912/92, University of Oxford, Department of Engineering Science, April 1992
	CU	M.P. Henry et al., "A New Approach to Sensor Validation", Improving Analyser Performance, IMC, March 17, 1992
Examiner Signature		Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 02052-079004	Application No. 10/637,620
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Manus P. Henry et al.	
		Filing Date August 11, 2003	Group Art Unit 1732

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	CV	M.P. Henry et al., "A Self-Validating Digital Coriolis Mass-flow Meter" (1); overview, 1999
	CW	M.P. Henry et al., "A standard Interface for Self-Validating Sensors", Report No. QUEL 1884/91, University of Oxford, Department of Engineering Science, Sept. 1991
	CX	M.P. Henry et al., "Signal processing, Data Handling and Communications: The Case for Measurement Validation", March 1992
	CY	M.P. Henry et al., "The Self-Validating Sensor: Rationale Definitions and Examples", <i>Control Engineering Practice</i> , 1 (4), pp 585-610, 1993
	CZ	M.P. Henry, "Intelligent Behaviour For Self-Validating Sensors", Advances in Measurement, pp 1-7 date unknown
	DA	M.P. Henry, "Self-Validation Improves Coriolis Meter", <i>Control Engineering</i> , 42 (6), pp 81-86 (1995)
	DB	M.P. Henry, "Sensor Validation and Fieldbus", <i>IEE Computing and Control Engineering Journal</i> , 6 (6), pp 263-269
	DC	R.P. Liu et al., "A Neural Network to Correct Mass Flow Errors Caused by Two Phase Flow in a Digital Coriolis Mass Flow Meter". Engineering Science Department, Oxford University
	DD	

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	